

Brn-3b (N-15): sc-31987

BACKGROUND

The Brn family of transcription factors are found in a highly restricted subset of neurons and are critical to the early embryonic development of the central nervous system. Brn-1 and Brn-2 are class III POU (Pit-Oct-Unc) domain proteins, whereas Brn-3 is a class IV POU domain protein. Three Brn-3 proteins have been described and are designated Brn-3a, Brn-3b and Brn-3c. While Brn-3a and Brn-3c stimulate transcription, Brn-3b generally functions as a transcriptional repressor. However, Brn-3b, but not Brn-3a, has been shown to regulate the expression of the acetylcholine receptor. Interestingly, Brn-3a has two functional transactivating domains, one at the amino-terminus and one at the carboxy-terminus. Brn-2 is thought to be involved in smooth muscle cell development and differentiation.

CHROMOSOMAL LOCATION

Genetic locus: POU4F2 (human) mapping to 4q31.22; Pou4f2 (mouse) mapping to 8 C1.

SOURCE

Brn-3b (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Brn-3b of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-31987 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-31987 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Brn-3b (N-15) is recommended for detection of Brn-3b of mouse, rat and human by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Brn-3b (N-15) is also recommended for detection of Brn-3b in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Brn-3b siRNA (h): sc-38766, Brn-3b siRNA (m): sc-38767, Brn-3b shRNA Plasmid (h): sc-38766-SH, Brn-3b shRNA Plasmid (m): sc-38767-SH, Brn-3b shRNA (h) Lentiviral Particles: sc-38766-V and Brn-3b shRNA (m) Lentiviral Particles: sc-38767-V.

Brn-3b (N-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Brn-3b: 51 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or mouse eye extract: sc-364241.

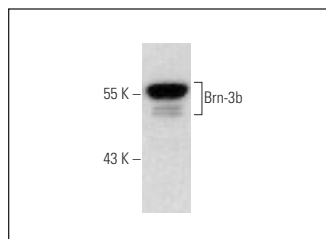
RESEARCH USE

For research use only, not for use in diagnostic procedures.

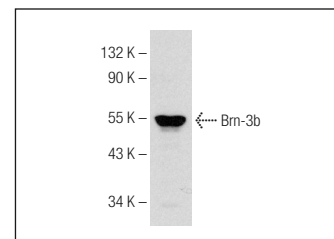
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Brn-3b (N-15): sc-31987. Western blot analysis of Brn-3b expression in mouse eye tissue extract.



Brn-3b (N-15): sc-31987. Western blot analysis of Brn-3b expression in K-562 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Lee, S.A., et al. 2005. Expression of the Brn-3b transcription factor correlates with expression of HSP-27 in breast cancer biopsies and is required for maximal activation of the HSP-27 promoter. *Cancer Res.* 65: 3072-3080.
2. Schwechter, B.R., et al. 2007. Histone deacetylase inhibition-mediated differentiation of RGC-5 cells and interaction with survival. *Invest. Ophthalmol. Vis. Sci.* 48: 2845-2857.
3. Sun, X., et al. 2009. Gene expression and differentiation characteristics in mice E13.5 and E17.5 neural retinal progenitors. *Mol. Vis.* 15: 2503-2514.
4. Jin, K., et al. 2010. Early B-cell factors are required for specifying multiple retinal cell types and subtypes from postmitotic precursors. *J. Neurosci.* 30: 11902-11916.
5. Bhatia, B., et al. 2011. SOX2 is required for adult human muller stem cell survival and maintenance of progenicity *in vitro*. *Invest. Ophthalmol. Vis. Sci.* 52: 136-145.
6. Bhatia, B., et al. 2011. Differences between the neurogenic and proliferative abilities of Müller glia with stem cell characteristics and the ciliary epithelium from the adult human eye. *Exp. Eye Res.* 93: 852-861.
7. Meng, F., et al. 2013. Induction of retinal ganglion-like cells from fibroblasts by adenoviral gene delivery. *Neuroscience* 250: 381-393.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **Brn-3b (D-8): sc-514474** or **Brn-3 (A-4): sc-390780**, our highly recommended monoclonal alternatives to Brn-3b (N-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Brn-3b (D-8): sc-514474**.